

## **Stream Bank Stabilization Project Saves the Farm**

Jeffery Peppers, a landowner in Jackson County was concerned that he was losing some of his river bottom field on Spring Creek. He contacted the USDA-Natural Resources Conservation Service Field Office in Gainesboro for assistance.

Philip Dixon, NRCS District Conservationist made a field visit to Peppers farm and found a 10 foot tall vertical bank next to Spring Creek which runs through his farm. Spring Creek in Jackson County drains or has its watershed coming from the town of Cookeville.

As a result of the rapid growth in Cookeville there is more pavement, rooftops and soil compaction. As this change in land use occurs, when it rains the water does not soak into the ground, but runs off at a faster rate. With the rapid growth of Cookeville, there is a heavier concentration of rainwater runoff, which puts more pressure on the stream banks that carry the water. One of these rivers is Spring Creek.

Once there was a 75 ft. buffer area of trees next to the creek but the buffer was cut down to zero trees and a bare bank of soil. As a creek makes a turn, it builds up speed, just like a car going around a curve. As the water builds speed, it will cut the outer bank. This was Pepper's problem; he had a 10 foot bank of bare soil material that was continually being cut away.

He applied for the Environmental Quality Incentives Program (EQIP) to get cost-share assistance to repair this problem. It took approximately eight months from the time he applied, was funded, and an engineering design was developed to alleviate this problem. In those eight months, he lost approximately one acre of this field to stream bank erosion.

The EQIP program has a limit of \$15,000 in cost-share for stream banks but Peppers said the additional \$7,000 he spent to complete the project was money well spent. The project was completed within budget using a new innovative system of rock jetties.

Spring Creek had the 50-year storm just 30 to 45 days after installation. In fact, there were three 50-year storms in a two week period. Though the rock jetties are designed for a 25-year storm, they held the stream bank with only minor vegetative problems.

Not only has Jeffery Peppers stop the loss of his field to erosion, he has also reduced soil erosion and improved water quality in Spring Creek.